# General

## Guideline Title

Hospital-based violence intervention programs targeting adult populations: an Eastern Association for the Surgery of Trauma evidence-based review.

## Bibliographic Source(s)

Affinati S, Patton D, Hansen L, Ranney M, Christmas AB, Violano P, Sodhi A, Robinson B, Crandall M, Eastern Association for the Surgery of Trauma Injury Control and Violence Prevention Section [trunc]. Hospital-based violence intervention programs targeting adult populations: an Eastern Association for the Surgery of Trauma evidence-based review. Trauma Surg Acute Care Open. 2016;1:1-7. [40 references]

## Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

# Recommendations

## Major Recommendations

Populations (P), Intervention (I), Comparator (C) and Outcome (O) (PICO) Question

Are hospital-based intervention programs (HVIPs) attending to adult patients (age 18+) treated for intentional violent injury more effective than usual standard care in improving the following outcomes: intentional violent injury reinjury and/or death; arrest and/or incarceration; substance abuse and/or mental issues; quality of life; job and/or school attainment?

Recommendation

The guideline authors make no recommendation with respect to adult-focused HVIP interventions to reduce violent reinjury and other outcomes, due to quality of evidence concerns such as self-selection bias and small sample sizes. However, they acknowledge that some single center programs have been effective at improving outcomes among motivated patients. Ensuring that studies are sufï¬ciently and adequately staffed, continuing efforts to increase research funding for gun violence-related issues, and developing strategies to not only reach but also retain adult populations injured in intentional violence may lessen the constraints prohibiting robust empirical support for HVIPs.

## Clinical Algorithm(s)

None provided

# Scope

## Disease/Condition(s)

Intentional violent injury

## Guideline Category

Prevention

## Clinical Specialty

Emergency Medicine

Preventive Medicine

## Intended Users

Advanced Practice Nurses

Hospitals

Physician Assistants

Physicians

Psychologists/Non-physician Behavioral Health Clinicians

Public Health Departments

Social Workers

## Guideline Objective(s)

To evaluate the preventive efï¬cacy of hospital-based violence intervention programs (HVIPs) in adult patients (age 18+) treated for intentional violent injury

## Target Population

Adult victims of intentional violent trauma

Note: Given the complex multitude of variables pertaining to transnational political, social, and cultural heterogeneity, this review's objective was restricted to the United States of America (USA).

## Interventions and Practices Considered

Any trauma center, emergency department, or hospital-based postinjury violence intervention program (HVIP)

Note: No recommendation with respect to adult-focused HVIP interventions to reduce violent reinjury and other outcomes was made due to the quality of evidence.

## Major Outcomes Considered

- Intentional violent injury, reinjury and/or death
- Job and/or school attainment
- Arrest and/or incarceration
- Substance abuse and/or mental health issues
- Quality of life

# Methodology

## Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

## Description of Methods Used to Collect/Select the Evidence

Inclusion Criteria for This Review

Study Types

Studies included randomized controlled trials, prospective and retrospective observational studies, and case–control studies. Case reports, conceptual pieces, and reviews containing no original data or analyses were excluded. Additionally, any papers on child abuse, sexual assault, and/or intimate partner violence were excluded. Studies were limited to those written in English and conducted in the United States of America (USA). No limitations were put on year of publication.

Review Methods

Search Strategy

A research librarian aided the systematic search of PubMed, Web of Science, Google Scholar, and the Cochrane Library. After a preliminary query, the guideline authors chose to apply the following PubMed search string: ("Violence"[Mesh] AND ("Recurrence"[Mesh] OR recur* OR recidivism) AND "Health Facilities"[Mesh] AND (prevention OR intervention*). The guideline authors then inspected each review article's reference section. No restrictions were placed on either language or dates. They did, however, only include studies in the USA. Figure 1 in the original guideline document contains the MeSH terms used for the initial search. Eight months later a research assistant member of the writing team performed a unique and independent systematic search. Two new articles were found, neither of which met the populations (P), intervention (I), comparator (C), and outcome (O) (PICO) question criteria. Finally, in January 2016, an institutional research librarian performed a literature search which found two additional relevant articles, and these articles were included in their literature review.

Study Selection

After completing an exhaustive literature search, three independent reviewers and a research assistant screened the titles and abstracts, excluding reviews, case reports, youth-focused articles, and unrelated articles. The articles identiï¬ed in 2016 were screened by a single reviewer for inclusion. The resulting studies were used for the review. The study selection process is highlighted in the PRISMA ï¬,ow diagram for Figure 2 in the original guideline document.

A total of 71 abstracts were identiï¬ed by the search. Of these, zero were duplicates, three were excluded after title review, and one more was identiï¬ed after abstract review. Of the 25 articles selected for full review, the team found that 8 met their predetermined criteria. The remaining articles were either entirely or primarily youth focused (meaning participants were under the age of 18) or were reviews themselves and were therefore excluded from the ï¬nal data analysis. The subsequent literature search in 2016 found two more articles, bringing the total article number of reviewed articles to 10.

## Number of Source Documents

The total number of reviewed articles was 10. The study selection process is highlighted in the PRISMA flow diagram for Figure 2 in the original guideline document.

## Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

## Rating Scheme for the Strength of the Evidence

Grading of Recommendations Assessment, Development and Evaluation (GRADE) Methodology Levels for Rating the Quality of Evidence

| Quality Level | Definitions |
|---|---|
| High | Very confident that the true effect lies close to estimate of effect. |
| Moderate | Moderate effect; true effect is likely close to estimate of effect but may be substantially different. |
| Low | Limited confidence; true effect may be substantially different from estimate of effect. |
| Very Low | Little confidence; true effect likely substantially different from estimate of effect. |

## Methods Used to Analyze the Evidence

Systematic Review with Evidence Tables

## Description of the Methods Used to Analyze the Evidence

Data Extraction and Management

All articles, Grading of Recommendations Assessment, Development and Evaluation (GRADE) resources, and instructions were electronically available to all members of the writing team. Each independent reviewer shared his or her populations (P), intervention (I), comparator (C), and outcome (O) (PICO) sheet and literature review with all members of the team. Independent interpretations of the data were shared through group email, conference calls, and in-person discourse. No major reviewer discrepancies in grading occurred. Had they occurred, the guideline authors would have used a modiï¬ed Delphi technique to resolve differences.

Methodological Quality Assessment

The validated GRADE methodology was used for this study. The GRADE methodology entails the creation of a predetermined PICO question or set of PICO questions that the literature must answer. Each designated reviewer independently evaluates the data in aggregate with respect to the quality of the evidence to adequately answer each PICO question and quantified the strength of any recommendations. Reviewers are asked to determine effect size, risk of bias, inconsistency, indirectness, precision, and

publication bias.

Results

After applying validated GRADE methods, the quality of evidence proved too weak to warrant a separate assessment of interventional efficacy for each outcome.

## Methods Used to Formulate the Recommendations

Expert Consensus

## Description of Methods Used to Formulate the Recommendations

Understanding that violent injury prevention in adult populations has been less well studied than among youth, the writing team's leadership a priori created the populations (P), intervention (I), comparator (C), and outcome (O), or PICO question. Given the complex multitude of variables pertaining to transnational political, social, and cultural heterogeneity, this review's objective was restricted to the United States of America (USA).

PICO Questions

> Population: Adult victims of intentional violent trauma.
> Intervention: Any trauma center, emergency department, or hospital-based postinjury violence intervention program.
> Comparator: Usual standard of care.
> Outcomes: Intentional violent injury reinjury and/or death, job and/or school attainment, arrest and/or incarceration, substance abuse and/or mental health issues, and quality of life.

Are HVIPs attending to adult patients (age 18+) treated for intentional violent injury more effective than the usual standard care in improving the following outcomes: intentional violent injury reinjury and/or death; arrest and/or incarceration; substance abuse and/or mental issues; quality of life; job and/or school attainment? (PICO 1).

## Rating Scheme for the Strength of the Recommendations

Grading of Recommendations Assessment, Development and Evaluation (GRADE) Definition of Strong and Weak Recommendation

Recommendations are based on the overall quality of the evidence on the participant. GRADE methodology suggests the phrases, 'we recommend' for strong evidence, and 'we suggest' or 'we conditionally recommend' for weaker evidence.

| | Strong Recommendation | Weak/Conditional Recommendation |
|---|---|---|
| For patients | Most patients would want the recommended course of action. | Most patients would want the recommended course of action, but many would not. |
| For clinicians | Most patients should receive the recommended course of action. | Different choices will exist for different patients, and clinicians should help patients decide. |
| For policy makers | Recommended course should be adopted as policy. | Considerable debate and stakeholder involvement needed to make policy. |

## Cost Analysis

Two cost-effectiveness analyses were performed on previously studied samples, using reported reinjury

reduction rates. Markov mathematical modeling was used in both studies, which shared a coinvestigator. Modeling results concluded in both studies that there is a cost savings with hospital-based violence prevention programs (HVIPs).

### Method of Guideline Validation

External Peer Review

### Description of Method of Guideline Validation

Externally peer reviewed

## Evidence Supporting the Recommendations

### Type of Evidence Supporting the Recommendations

Of the 10 papers included in the guideline synthesis, 4 were randomized clinical trials (RCTs) and 6 were observational studies: 1 prospective and 5 retrospective, including 2 cost-effectiveness analyses. The 8 papers that provided original data about reinjury were all of low quality.

## Benefits/Harms of Implementing the Guideline Recommendations

### Potential Benefits

- Hospital-based violence intervention programs (HVIPs) have emerged nationwide to help address the societal and economic costs of violence. The goal of these programs is to intervene with those individuals who survive violent injury, at this 'sole access point' into the healthcare system. In addressing 'the psychosocial challenges that these patients face,' HVIPs are designed to interrupt the costly cycles of violent injury by transforming medical treatment into a catalyst for life and societal change.
- Of the seven articles reporting measurements of intentional violent injury recidivism and/or death, four demonstrated no effect (among three original sample pools). Three studies consisting of three unique sample pools suggested a positive interventional impact on intentional violent injury recidivism and/or death: The first study noted a 1-year reinjury reduction rate from 8.7% to 2.9%. Authors of the second study wrote that their 'nonintervention group was six times more likely than intervention group to be hospitalized as a result of a violent injury.' The third study reported a reduction in intentional violent reinjury from 16% to 4%. The three studies with a positive outcome had low sample sizes (combined n=254). One of these studies did not report how outcomes were assessed and another was limited by its historical comparison control group and the exclusion of inactive participants when measuring success.

### Potential Harms

Not stated

## Qualifying Statements

## Qualifying Statements

- The Eastern Association for the Surgery of Trauma (EAST) is a multi-disciplinary professional society committed to improving the care of injured patients. The Ad Hoc Committee for Practice Management Guideline Development of EAST develops and disseminates evidence-based information to increase the scientific knowledge needed to enhance patient and clinical decision-making, improve health care quality, and promote efficiency in the organization of public and private systems of health care delivery. Unless specifically stated otherwise, the opinions expressed and statements made in this publication reflect the authors' personal observations and do not imply endorsement by nor official policy of EAST.
- "Clinical practice guidelines are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances."* These guidelines are not fixed protocols that must be followed, but are intended for health care professionals and providers to consider. While they identify and describe generally recommended courses of intervention, they are not presented as a substitute for the advice of a physician or other knowledgeable health care professional or provider. Individual patients may require different treatments from those specified in a given guideline. Guidelines are not entirely inclusive or exclusive of all methods of reasonable care that can obtain/produce the same results. While guidelines can be written that take into account variations in clinical settings, resources, or common patient characteristics, they cannot address the unique needs of each patient nor the combination of resources available to a particular community or health care professional or provider. Deviations from clinical practice guidelines may be justified by individual circumstances. Thus, guidelines must be applied based on individual patient needs using professional judgment.

*Institute of Medicine. Clinical practice guidelines: directions for a new program. MJ Field and KN Lohr (eds) Washington, DC: National Academy Press. 1990: pg 39.

# Implementation of the Guideline

## Description of Implementation Strategy

An implementation strategy was not provided.

# Institute of Medicine (IOM) National Healthcare Quality Report Categories

## IOM Care Need

Staying Healthy

## IOM Domain

Effectiveness

Patient-centeredness

# Identifying Information and Availability

## Bibliographic Source(s)

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## Adaptation

Not applicable: The guideline was not adapted from another source.

## Date Released

2016

## Guideline Developer(s)

Eastern Association for the Surgery of Trauma - Professional Association

## Source(s) of Funding

Eastern Association for the Surgery of Trauma (EAST)

## Guideline Committee

Eastern Association for the Surgery of Trauma Injury Control and Violence Prevention Section and Guidelines Section

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## Financial Disclosures/Conflicts of Interest

Competing interests: None declared.

## Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

## Guideline Availability

Available from the Eastern Association for the Surgery of Trauma (EAST) Web site .

## Availability of Companion Documents

The following is available:

Kerwin AJ, Haut ER, Burns JB, Como JJ, Haider A, Stassen N, Dahm P, Eastern Association for the Surgery of Trauma Practice Management Guidelines Ad Hoc Committee. The Eastern Association of the Surgery of Trauma approach to practice management guideline development using Grading of Recommendations Assessment, Development, and Evaluation (GRADE) methodology. J Trauma Acute Care Surg. 2012 Nov;73(5 Suppl 4):S283-7. Available from the Eastern Association for the Surgery of Trauma (EAST) Web site .

## Patient Resources

None available

## NGC Status

This NGC summary was completed by ECRI Institute on March 8, 2017. The guideline developer verified the information on March 10, 2017.

## Copyright Statement



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